

IN THE SPECIFICATION

Page 1, line 9, please replace the paragraph with the following:

The scintillation mechanisms rely on a number of physical principles which essentially convert the high energy of the incoming photons or particles into light which is within or reasonably close to the visible range. Of particular interest are single crystal forms of scintillators, ~~[[ie]]~~ i.e., pieces that are at the scale of use constituted of one (at most a few) crystals. A single crystal (~~monocrystal~~ monocrystal) configuration allows easier extraction of the emitted light over thick dimensions thanks to lack of internal diffusion through grain boundaries, heterogeneities and other defects that tend to be present in polycrystalline materials. A crystalline structure (in the atomic sense) is required as it determines the scintillation mechanisms: a glassy, amorphous state of matter is likely to yield different scintillation properties. The extracted light is then collected with various devices well known to the man of the art, like photomultiplier tubes, photodiodes etc. Another configuration is to still retain the crystalline structure of the material, and use it in powder form, either packed or sintered or mixed with a binder in a way that still allows light extraction. Usually, those configurations are too opaque when more than a few millimeters thick, a thickness which may not be sufficient to stop enough incoming particles or photons. Overall, whenever possible and cost effective, single crystals are preferred.

Page 2, line 3, please replace the paragraph with the following:

In a way well-known ~~know~~ to the man in the field, an energy spectrum of the scintillator under incoming radiation is drawn, whereby events are represented on a histogram (with energies on the x-axis, the number of counts on the y-axis). In the acquisition protocol, "channels" are defined to collect the signal within a particular energy range.

Page 4, line 10, please replace the paragraph with the following:

The scintillating material of the invention can be manufactured under the form of a ~~monocrystal~~ monocrystal. In this case, its volume is generally at least 10 mm^3 . The material can also be used in the form of a powder (~~polycrystalline~~ polycrystalline), possibly either packed or sintered or mixed with a binder.

Following the claims, please replace the Abstract in its entirety with the attached substitute Abstract (appended to the end of this paper).